REMARKS

The Examiner rejected claims 12 and 13 under 35 U.S.C. 103(a) as being unpatentable over Jiang et al ("Jiang") in view of He et al ("He") and further in view of Minamino et al ("Minamino"). Applicant respectfully traverses these improper and nonobvious combinations suggested by the Examiner. Applicant has amended claim 12 for clarity as to the configuration of the fiber pigtailed assembly to which the current adjusting method pertains, as well as to define the axis of the rotation angle, which conforms to issued U.S. Patent No. 6,789,955 which is the parent case for the present application.

The present invention claims a method of adjusting a fiber pigtailed assembly as shown in Figs. 2-4 to minimize back reflectance and polarization-dependent responsivity, and is illustrated in Fig. 6. Such fiber pigtailed assembly has a beveled end of the optical fiber **28** adjacent to an optical detector surface **26** tilted with respect to the beveled end so that light is coupled along an optical axis from the optical fiber to the optical detector. The optical detector or optical fiber, or both, are rotated with respect to each other about the optical axis, i.e., a rotation angle is adjusted, while an electrical output from the detector is observed for a minimum peak-to-peak value. The tilt of the detector surface also may be adjusted so that the combination of rotation angle and tilt angle is found that produces the minimum peak-to-peak value.

The Examiner states that Jiang discloses the claimed method by disclosing an optical fiber with a beveled end so that the light from the beveled end impinges on the detector surface with low back reflectance (which is the prior art cited by

Applicant); and that Jiang discloses the detector surface being tilted (however what is taught is that the surface may be tilted with respect to the end of the optical fiber in lieu of beveling the end of the fiber or that there may be a combination of tilt and beveling in the same plane, not tilting with respect to the beveled end, i.e., $\alpha = \beta = \alpha' + \beta'$, to reduce back reflectance -- polarization dependent responsivity is not addressed), The Examiner admits that Jiang does not show a source of light having a plurality of polarization states or adjusting a rotation angle, but that He shows it is known to provide light having a plurality of polarization states and to adjust a rotation angle (in He the rotation angle is adjusted to determine the minimum and maximum response axis for the detector **12** for proper mounting in the bracket **14**). The Examiner concludes that it would have been obvious to one of ordinary skill in the art to combine the device of Jiang with the polarized light source and detector/fiber rotation along an optical axis for providing polarization alignment between the beveled end of the optical fiber and the tilted detector to reduce misalignment. However the present invention addresses polarization-dependent responsivity, not misalignment. What He addresses is the inherent PDR in the detector itself, not the induced PDR produced by the fiber pigtail assembly that has tilted surfaces. Further He introduces a window between the optical fiber and the detector to introduce PDR counter to that of the detector, and any tilt between the detector and optical fiber is one-dimensional as in Jiang.

Applicant recites in claim 12 that the optical detector surface is tilted with respect to the beveled end, i.e., there is a two-dimensional relationship between the tilt and the beveled end -- the two are not additive but in different planes. Neither reference teaches this configuration. Although He teaches a source of light having a plurality of polarization states, such source is transmitted directly to the detector, not

to the optical fiber of the fiber pigtailed assembly. Therefore the "electrical output" observed by He is that from the detector only, not through the optical fiber beveled end and the tilted detector. Therefore the combination of He with Jiang does not teach or suggest that the light with many SOPs be provided to the fiber while observing the output from the detector. Any rotational adjustment by He merely aligns the maximum and minimum response axes of the detector. To correct for the detector PDR He requires the intervening window. Thus claim 12 is deemed to be allowable as being nonobvious to one of ordinary skill in the art over Jiang in view of He.

With respect to claim 13 the spacer of Minamino is not adjustable – the desired inclination is known. Therefore Minamino in combination with Jiang and He still does not produce the adjustment method as recited in claim 13. Since claim 13 depends from a claim deemed to be allowable and recites additional limitations not taught by Minamino, claim 13 also is deemed to be nonobvious to one of ordinary skill in the art over Jiang in view of He and Minamino.

In view of the foregoing amendment and remarks allowance of claims 12 and 13 is urged, and such action and the issuance of this case are requested.

Respectfully submitted,

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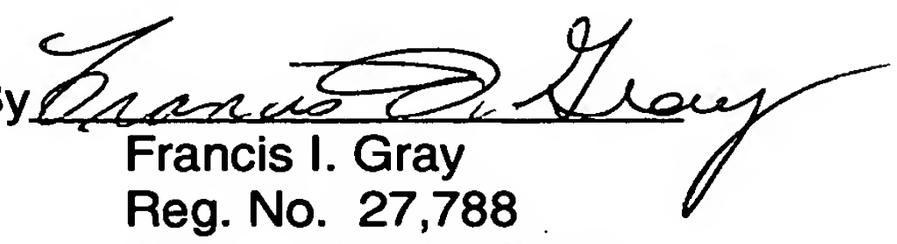
By 
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